



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,592	11/14/2003	James G. Shanahan	940630-010023	2005

7590 04/19/2007  
Blaney Harper  
Jones Day  
51 Louisiana Avenue, NW  
Washington, DC 20001-2113

EXAMINER	
LOVEL, KIMBERLY M	
ART UNIT	PAPER NUMBER
2167	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/713,592	<b>Applicant(s)</b> SHANAHAN ET AL.	
	<b>Examiner</b> Kimberly Lovel	<b>Art Unit</b> 2167	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/1/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This communication is in response to the Amendment filed 8 January 2007.
2. Claims 1-8 and 16-23 are pending in this application. Claims 1, 8, 18, 22 and 23 are independent. In the Amendment filed 8 January 2007, claims 1-8 were amended; claims 9-15 were canceled; and claims 16-23 were added. This action is made Final.
3. The rejections of claims 8-15 as being anticipated by US PGPub 2003/0130993 to Mendelevitch et al and claims 1-7 as being unpatentable over US PGPub 2002/0078035 to Frank et al in view of US PGPub 2003/0130993 to Mendelevitch et al have been withdrawn as necessitated by amendment.

### ***Information Disclosure Statement***

4. The information disclosure statement (IDS) submitted on 2/1/2007 was filed after the mailing date of the office action on 8/7/2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

5. The objections to the drawings have been withdrawn as necessitated by amendment.

***Claim Objections***

6. The objections to claims 2 and 7 have been withdrawn as necessitated by amendment.

***Claim Rejections - 35 USC § 101***

7. The rejections of claims 1-15 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter have been withdrawn as necessitated by amendment.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 1-3 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by US PGPub 2004/0039786 to Horvitz et al (hereafter Horvitz).**

Referring to claim 1, Horvitz discloses a computer-implemented process for generating a filter for selecting documents, comprising:

identifying a plurality of profiles from a set of training documents [email messages] (see Fig 1, item 110; [0034] and [0035]);

creating a sub-filter for each of said plurality of profiles, each of said sub-filters having an input and an output [bulk email filter and urgency filter] (see [0034]),

connecting each of said inputs at a single node (see Fig 1);

combining each of said outputs to thereby form said filter for selecting documents [cascading filters] (see [0040]); and

storing said filter for selecting documents in a computer readable medium, said filter for selecting documents being accessible by computer readable program code for filtering and selecting documents (see [0030]);

wherein creating each sub-filter comprises the steps of

selecting a first subset and a second subset from a set of training documents [training the different filters] (see [0040]),

extracting a set of features from the first subset [feature selection] (see [0032]), and

calculating a score threshold for the set of features from the second subset [computing urgency] (see [0035] and [0036]).

**Referring to claim 2**, Horvitz discloses a computer-implemented process, as in claim 1, further comprising:

multiplexing said outputs of said sub-filters to create a first filter output [multi-level filters] (see [0032]).

**Referring to claim 3**, Horvitz discloses a computer-implemented process, as in claim 2, further comprising:

combining said first filter output with at least one sub-filter output to create at least one second filter output (see [0032]).

**Referring to claim 4**, Horvitz discloses a computer-implemented process, as in claim 3, further comprising:

aggregating said first filter output and said second filter output using a function [urgency filter] (see [0036]).

**Referring to claim 5**, Horvitz discloses a computer-implemented process, as in claim 4, wherein said function is a linear function [expected urgency] (see [0038]).

**Referring to claim 6**, Horvitz discloses a computer-implemented process, as in claim 4, wherein said function is a weighted function [weighting component] (see [0035]).

**Referring to claim 7**, Horvitz discloses a computer-implemented process, as in claim 4, wherein said function is a aggregation function (see [0034]).

**Referring to claim 8**, Horvitz discloses a computer-implemented process for generating an ensemble filter for selecting documents from a document source, comprising:

identifying a plurality of sets of documents from a set of training documents [email messages] (see Fig 1, item 110; [0034] and [0035]);

identifying a plurality of profiles corresponding to said plurality of sets of documents ([0034] and [0035]);

creating a plurality of sub-filters for said plurality of profiles, each of said sub-filters having an input and an output [bulk email filter and urgency filter] (see [0034]),

combining a first one of said plurality of sub-filters with a second one of said plurality of sub-filters to thereby create an ensemble filter [cascading filters] (see [0040]); and

storing said ensemble filter for selecting documents in a computer readable medium, said filter for selecting documents being accessible by computer readable program code for filtering and selecting documents (see [0030]);

wherein creating each sub-filter comprises the steps of

selecting a first subset and a second subset from a set of training documents [training the different filters] (see [0040]),

extracting a set of features from the first subset [feature selection] (see [0032]), and

calculating a score threshold for the set of features from the second subset [computing urgency] (see [0035] and [0036]).

**Referring to claim 16**, Horvitz discloses a computer-implemented process, as in claim 8, wherein the document source is a database of documents (see [0151]-[0153]).

**Referring to claim 17**, Horvitz discloses a computer-implemented process, as in claim 8, wherein the document source is a stream of documents (see [0151]-[0153]).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**10. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2004/0039786 to Horvitz et al in view of US Patent No 6,430,559 to Zhai (hereafter Zhai).**

**Referring to claim 18**, Horvitz discloses a computer-implemented process for generating a filtering profile for selecting documents comprising the steps of:

selecting a first subset of training documents and a second subset of training documents from a set of training documents [email messages] (see Fig 1, item 110; [0034]; and [0035]);

creating a filtering profile having an input and an output by extracting a set of features from the first subset of training documents [feature selection] (see [0032] and [0034]);

creating a score threshold for the filtering (see [0035] and [0036]); and

storing said filtering profile for selecting documents in a computer readable medium, said filtering profile for selecting documents being accessible by computer readable program code for filtering and selecting documents (see [0030]).



However, while Horvitz discloses creating a score threshold, Horvitz fails to explicitly disclose the further limitation of creating a score threshold for the filtering profile by calculating an optimal score threshold for the set of features from the second subset of training documents. Zhai discloses filtering documents (see abstract), including the further limitation of creating a score threshold for the filtering profile by calculating an optimal score threshold for the set of features from the second subset of training documents (see column 5, lines 16-32) in order to sufficiently filter data in a way that only returns relevant information to a user.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the optimal score threshold of Zhai as the calculated threshold of Horvitz. One would have been motivated to do so in order to sufficiently filter data in a way that only returns relevant information to a user (Zhai: see column 1, lines 19-22).

**Referring to claim 19**, the combination of Horvitz and Zhai (hereafter Horvitz/Zhai) discloses the computer-implemented process of claim 18 wherein extracting a set of features further comprises identifying features in the first subset using a term frequency inverse document frequency ("TF-IDF") score (see column 4, lines 10-15).

**Referring to claim 20**, Horvitz/Zhai discloses the computer-implemented process of claim 18 wherein extracting a set of features further comprises performing a Rocchio algorithm (see column 5, lines 8-14).

**Referring to claim 21**, Horvitz/Zhai discloses the computer-implemented process of claim 18 wherein calculating an optimal score threshold further comprises performing a beta-gamma thresholding algorithm (see column 3, lines 6-19).

**Referring to claim 22**, the apparatus is rejected on the same grounds as the method of claim 18.

**Referring to claim 23**, the article of manufacture is rejected on the same grounds as the method of claim 18.

***Response to Arguments***

11. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Contact Information**

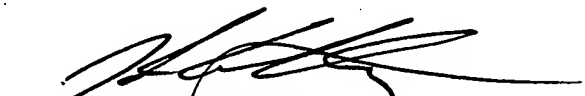
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly Lovel  
Examiner  
Art Unit 2167

15 April 2007  
kml

  
JOHN COTTINGHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

